DOCUMENT RESUME

ED 448 472 CS 217 366

AUTHOR Donohoe, Renee; McNeely, Teresa
TITLE The Effect of Student Music Choice on Writing Productivity.
PUB DATE 1999-05-00
NOTE 29p.
PUB TYPE Reports - Research (143)
EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Grade 4; Intermediate Grades; *Music; Productivity; Student Motivation; *Writing Attitudes; *Writing Improvement; Writing Research

ABSTRACT

Researchers investigated the influence that perceived choice of music would have on student writing productivity. Participants included 2 fourth-grade classes in Louisa and Madison Counties, Virginia, for a total of 32 students. A survey was used to determine participants' preferences of music. A quasi-experimental design was utilized to investigate whether the number of words written would increase with exposure to preferred music over time. The results were not significant for the participant pool as a whole; however, the Madison population yielded significant results with students writing a greater amount of words in the music conditions. The findings provide partial support for the researchers' expectations and provide evidence for the influence of music on writing productivity. (Contains 10 references and 3 figures of data. Appendixes contain the survey instrument, questions used during student interviews, and survey results.) (Author/RS)

Reproductions supplied by EDRS are the best that can be made
from the original document.

ED 448 472

The Effect of Student Music Choice on Writing Productivity

By:

Renee Donohoe

And

Teresa McNeely

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

BEST COPY AVAILABLE

R Donohoe
T. McNeely

CS 217 366

Abstract

Researchers investigated the influence perceived choice of music would have on student writing productivity. Participants included two fourth-grade classes in Louisa and Madison Counties for a total of 32 students. A survey was used to determine participants' preferences of music. A quasi-experimental design was utilized to investigate whether the number of words written would increase with exposure to preferred music over time. The results were not significant for the participant pool as a whole; however, the Madison population yielded significant results with students writing a greater amount of words in the music conditions. The findings provide partial support for the researchers' expectations and provide evidence for the influence of music on writing productivity.

The Effect of Student Music Choice on Writing Productivity

"I **HATE** writing!" What teacher has not heard this phrase in his or her classroom? A common problem teachers will face is changing this loathing to loving. Motivating students to write remains one of the most difficult obstacles that teachers must overcome. Teachers, psychologists, and educational theorists have all documented this problem and have incorporated various strategies to enhance students' writing. Researchers have found several factors that positively influence students' academic performance. These include providing choices in various aspects of the classroom, creating an environment conducive to learning, and maintaining an anxiety-free classroom. Studies have shown that these factors or a combination thereof, produce positive effects on children's learning. This is especially true for low-achieving and at-risk students. With the growing number of identified special education students and the increasing rate of inclusion, teachers will likely encounter such students in their classrooms. When teachers are planning for their classrooms they must consider the options available for maximizing students' motivation and ultimate success.

The first element teachers must consider is how to increase students' motivation to learn and perform. Dickinson explored choice as a motivational factor in a class of low-achieving secondary students. She hypothesized that increasing students' motivation to write would increase their overall writing productivity. Two opportunities for choice were presented during a Writer's Workshop. Writer's Workshop is a process by which students use the following steps for their writing: Prewriting, rough draft, editing/conferencing, and final product/publishing. Over a twelve-week period, students were allowed to choose which topics they would write about and in which genre (i.e. short story, science fiction, tall tale, poetry, etc.) they would write.

In addition they were allowed to work with each other if they chose to do so. Emphasis was placed on the content of writing and not on the mechanics. Consistent with the hypothesis Dickinson found that the number of words written increased by 50% during this period. Moreover she observed an improvement in student behavior over time. From these data Dickinson concluded that allowing students to choose their own topics and guide their own writing helped to increase the quantity of their writing. Thus, student choice plays an important role in the motivation of writing.

Oldfather (1993) also noted the motivating power that choice held for students. She observed a successful whole language classroom and conducted a series of interviews with fourteen fifth and sixth grade students in the class. Overall, students demonstrated a positive affect for choice. They found choice especially motivating in the area of writing. By having the option to choose their own topics students were able to experience a greater sense of ownership of their work (Oldfather, 1993). Furthermore, students commented that writing in this manner provided them with the opportunity to express their feelings which they found important (Oldfather, 1993). Consequently, students' perceptions of ownership serve as a motivating force as well.

Just as choice impacts students' levels of motivation, the classroom environment itself can function as a positive stimulus for student performance. One factor in the environment to consider is the level of anxiety students will face and how this will affect their work. Hanser (1985) researched listening to music as a stress reduction method. Early studies document the positive effects music has on relaxation. However, several researchers have been unable to replicate these results. Hence, the effect of music on anxiety reduction remains inconclusive. Hanser (1985) cites methodological errors as the main reason for these inconsistencies. She suggests isolating music as a means to remedy this problem because of the variability of music.

The need for clear definitions of the experimental variables of anxiety and relaxation response was also recommended.

In an attempt to resolve these previous methodological glitches Siegel (1986) limited his study on anxiety to include fewer independent and dependent variables. Siegel (1986) explored a technique to reduce students' test anxiety. He worked with two groups of college students. One group received stress reduction training while the other, the control group, received no treatment. Over a period of time students in the experimental group began to associate music with a relaxation response through Pavlovian conditioning techniques. Disregarding all other measures, Siegel (1986) used only self-reported data to draw conclusions. Through comparison of pre- and post-treatment questionnaire scores, students in the experimental group showed a marked improvement in their levels of test anxiety while students in the control group demonstrated an increase in their levels of test anxiety. In this experiment, music appeared to have a calming effect on students because it was associated with the relaxation response. This result may have implications for use of music in other situations, specifically in the classroom setting.

As music has been shown to have a calming effect in the laboratory setting, it is quite possible that it could have the same effect in the classroom. Researchers also believe that music could serve as an aid in learning and motivation. Stainback, Stainback, & Hallahan (1973) examined the effects of calming background music on the learning of a task by educable mentally retarded students. Four groups of students were exposed to one of four conditions: the presence of music and distracting noise, the presence of music and no distracting noise, no music and the presence of distracting noise, or the absence of music and distracting noise. Stainback et al (1973) found that only the presence or absence of music affected students' learning of the task. Those students

who were exposed to background music were able to learn the task more quickly than their peers in no-music conditions were. Due to these results Stainback et al (1973) concluded that music could be a positive influence in helping students to focus on necessary stimuli while learning. Given these beneficial results with a special population, we believe this technique can be generalized to all students.

Based on such findings, other researchers sought to find whether music could provide beneficial results in specific content areas with a cross-sectional population. Etaugh & Ptasnik (1982) wanted to examine the effects of studying while listening to music on reading comprehension in college students. Relaxation prior to testing comprehension was a secondary variable under investigation. Forty participants were randomly assigned to one of four conditions: studying with music and relaxing afterwards, studying with music and reading irrelevant material afterwards, studying in silence and then relaxing, or studying in silence and then reading irrelevant material. Etaugh & Ptasnik (1982) found that overall participants who were able to relax prior to testing performed better on the comprehension test than those who engaged in a distracting reading activity. Additionally they observed that those students who usually studied with music performed better when they were in a condition that had the presence of music while those who usually studied in silence performed better in a condition without music. Evidently previous study habits were the best indicators of test performance for the given conditions.

As the use of music in the classroom has met with beneficial results in the area of reading, perhaps it is possible to obtain similar results in the area of writing. In a review of literature Ebisutani investigated the use of music in literacy development. Three kinds of articles were

examined including theoretical articles, research reports, and practical application suggestions. She found that theories promoting the inclusion of music in language arts programs are not supported by practical research. Nevertheless, the research was inconsistent, as there were some studies that showed that the inclusion of music was advantageous. Specifically Ebisutani emphasized "the potential" for music to affect reading rate and writing fluency. More extensive research in this area was recommended.

In an effort to expand knowledge about the use of music in the classroom, Koppelman & Imig conducted a quasi-experiment to explore the effects of different genres of music on writing content. They based their study on the idea that background noise can affect writing skills. Over a course of ten sessions, a class of second graders wrote for a period of fifteen minutes while listening to either jazz, classical, country or popular music or no music at all. Each student wrote under each condition twice and was able to choose their own topic each time. Koppelman & Imig found that students wrote more under the classical music condition (i.e. word count increased). They also noted students maintained consistency while writing in the jazz and popular music conditions (i.e. they stayed on topic). Finally, the popular music had a negative effect on writing production as students would dance and sing during this condition. Koppelman & Imig attributed this to students' familiarity with the music. Obviously this study demonstrates that music does affect writing. This effect appears to be determined by the type of music played.

Given music's potential for motivation and the previously mentioned benefits of choice on motivation, perhaps a combination of these elements will produce a positive interaction and influence on motivation. Dwyer (1995) considered this possibility in his study on intrinsic motivation during aerobic exercise. Thirty-four participants were randomly assigned to one of

two groups. Prior to the experiment participants in the experimental group indicated their preferences of music. This group thought that the music later played reflected their choice of music. The control group did not indicate music preferences and listened to the same music chosen by the experimenter. Participants exercised for twenty-five minutes while viewing the same exercise videotape and listening to the same music. Afterwards participants completed an intrinsic motivation inventory to measure their intrinsic motivation while exercising. Dwyer (1995) found that participants in the perceived choice of music group (experimental group) displayed higher scores of intrinsic motivation as compared to members of the control group. It would appear that having a choice in creating the environment in which one works produces higher levels of motivation.

Other researchers wished to see if having a choice in creating the classroom environment would affect academic performance. Etaugh & Michals (1975) documented that in previous studies on the effects of music on academic performance, the experimenter always chose the music. In their study participants were allowed to choose their own music. Thirty-two college students brought their preferred music with them to the experiment. Each participant completed a reading comprehension test after participating in two conditions. One condition was reading a passage while listening to their music and the other was reading a passage in silence. The participants also reported whether they usually studied while listening to music or not. Etaugh & Michals (1975) found that females performed better on the comprehension test when they had read in silence while males performed equally in both conditions. Etaugh & Michals (1975) noted that more males had reported studying with music. From these results they concluded that those students who often studied with music were less impaired in their reading comprehension.

This supports the idea that more familiar sounds are less distracting. This finding contradicts other research and demonstrates the need for further research in this area.

The present study addresses this contradiction and attempts to eliminate methodological errors found in previous studies. Given the possibility for choice and music to be motivational factors on their own, one may be interested in finding the effects of using the combination of them in the classroom. Past research investigated this interaction effect with regards to exercise motivation and reading comprehension (Dwyer, 1995 & Etaugh & Michals, 1975). The present study explores the possible impact of perceived choice of music on students' writing productivity. Writing tends to be one of students' least favorite activities particularly for low-achieving students. With this idea in mind, a quasi-experiment was designed to assess the usefulness of student selected music on the writing of low-achieving elementary students.

By including elementary aged participants this study broadens the scope of research in this field and consequently its results are more applicable to educators at different grade levels. Moreover, by not limiting the participant pool to a special education population (e.g. educable mentally retarded students), the findings can be more readily generalized (Stainback et al, 1973). The classroom populations selected for this research represented similar ability and age levels. Additionally previous exposure to music in the classroom was considered when choosing the participant pool. That is, one class had prior experience writing to music, while the other did not. A comparison of these samples' results would therefore highlight any discrepancies in writing productivity due to previous exposure.

A confounding variable of other studies has been familiarity of music. To correct this confound a repeated measures design was included. By using this longitudinal design, students'

progress over time could be observed. Furthermore, all students listened to the same music over several trials. Thus this eliminated the familiarity component of the final measures of writing productivity, as all students had become familiar with the music by the end of the study. It is hypothesized that the distraction associated with music familiarity will be lessened.

As suggested by Dwyer (1995) participants listened to excerpts of music from several genres before rating their music preferences. This allowed students to be aware of all their options for music selection before they made their choice. Additionally the listening allowed those students who were not strong readers to evaluate the music choices without being limited by their comprehension level. As recommended by Ebisutani greater care was taken when defining the dependent variable. An objective measure of word count was utilized to calculate writing productivity instead of making a subjective quality assessment. However, an open ended interview component was included to determine students' reactions to the study. The information gathered provided insight into the motivation students felt while writing. An interview format was selected due the age of the students as well as their varying reading levels. It was thought that students could more fully express themselves in this format rather than a written one.

Finally, there is limited research in this area. Due to a lack of reliable resources for ways to increase motivation in writing, the intent of this study is to provide possible alternatives to increase students' enjoyment of writing. It is believed that student choice in music will motivate students to write. That is, it is hypothesized that while listening to music of their choice, students' writing productivity will increase over time.

Method

Participants

Two fourth grade classes participated in this study. Both classes were in schools located in a rural area. These classes were chosen as the researchers had completed student teaching in them. Both classes could be characterized as having a majority of low-achieving students. Following is a description of each population.

One class was in Madison County, Virginia, and consisted of 18 students. There were six male students and twelve female students. No students within the class have been identified for special education services although several are performing below grade level. Prior to the study music had not been incorporated into the class. Moreover, students were not accustomed to routine free writing prompts.

The other class was in Louisa County, Virginia, and consisted of 22 students. There were fourteen male students and eight female students. One student has been identified for special education services and several others are in the process of being identified. Additionally many are performing below grade level in the area of writing. Throughout the year music had been integrated into the class during writing. These students were accustomed to routine teacher selected writing prompts. However, they had not been exposed to the option of free writing.

Data for participants who were not present during all four trials were not included in the data analysis. This decision was made because students would have limited exposure to music while writing which could skew the results. A total of eight participants' data was excluded resulting in a total of thirty-two participants.

Design

The quasi-experiment followed a repeated measures design. That is an initial baseline of writing quantity was obtained followed by three writing sessions accompanied by music. Two groups of students participated in the data collection. The same music was used during all three writing sessions and all writing sessions were fifteen minutes in duration.

Materials

Students' music choice was ascertained through the use of a multi-section survey (See Appendix A). The survey consisted of four parts. The first section was a listening response rating scale. Five songs representing five different genres of music were compiled. The genres included Top 40, classical, country, alternative, and hip-hop music. After listening to an excerpt of each song, students rated their liking of the song on a five point Likert scale with 1 representing extreme disliking of the song and 5 representing extreme liking of the song. Students also needed to note whether they had heard the song before by circling yes or no. The second section of the survey contained a ranking of the five genres of music from 1 to 5 with 1 representing the most favorite type of music and 5 representing the least favorite type of music. The third section included a series of four yes or no questions concerning students' study habits. The final portion of the survey asked students to name their favorite song and musical artist. Students' song preferences were considered when creating the tape of music to be played during writing.

An audiotape was dubbed with songs from the top two genres chosen at each school. To maintain control the same tape of songs was used at both schools for all writing sessions. Songs

were chosen from the Top 40 and hip-hop genres. The songs included were: "I Want You Back" by N'SYNC, "Can't Take My Eyes Off of You" by Lauryn Hill, "Everybody (Backstreet's Back)" by Backstreet Boys, and "My Way" by Usher. These songs totaled approximately fifteen minutes of playing time. Additional materials included cassette tapes and cassette tape recorders for the interview portion of the study. A script of the interview questions can be found in Appendix B.

Procedure

The same procedure was followed for each group of students. On the first day students were informed that they would be helping the researchers, their former teachers, with a project on writing. Students were instructed to write on a topic of their choosing for fifteen minutes in silence. This established a baseline of students' writing productivity (i.e. the number of words written). Following the writing activity, students were told they would complete a survey on music. For the first part of the survey students listened to a one-minute excerpt of a song from each of five genres of music. After listening to each song students were asked to rate how much they liked each song on a five point Likert scale. Each of the points was described to the students so they could choose the appropriate rating. Students also indicated whether they had heard the played song before or not. For the next portion of the survey students were asked to rank the genres of music from their most favorite to their least favorite. The process of ranking was discussed in detail so that students correctly identified their preferred genres. For the third section of the survey students responded to four yes or no questions. Each question was read aloud by experimenters so that reading ability would not interfere with students' answers. For

the final section of the survey students wrote in the name of their favorite song and their favorite musical artist.

Data collected from the initial visit were analyzed to determine students' overall preferences of music. The data from the surveys can be found in Appendix C. It was found that students in both groups preferred Top 40 and hip-hop music. Two songs from each of these genres were edited onto a tape to play for the later writing sessions.

During the second visit results from the survey were shared with the class. The purpose of the study was further explained by telling the students they would be writing with music playing for three fifteen minute sessions. Moreover, the students were informed that the music to be played was of their choosing. Students were told that the main purpose of the study was to see how their writing improved over time. Rules for listening to music while writing were discussed and included no singing, no dancing, no talking to others, as well as to keep writing for the entire fifteen minutes. Before writing possible topics were discussed and students were told to choose their own topic for writing. Students began writing once the music started. The experimenters circulated the classroom and monitored students' behavior. At the conclusion of fifteen minutes the class was told to stop writing and turn in their papers.

The same procedure was repeated for the third and fourth visits. Upon completing writing on the fourth visit, students were told that they would break into small groups for a discussion of the study. Two discussion groups, each facilitated by an experimenter, simultaneously answered questions presented by the experimenter. Students' responses were recorded by hand and/or audiotape.

Results

An alpha level of α=0.05 (confidence level = 95%) was used to test the statistical significance of the data. For the data collected for the number of words written for both schools in the no-music condition, M=95.00 words, SD=43.34 words, Min=27 words, and Max=188 words. For the average number of words written for both schools in the music conditions, M=105.09 words, SD=43.67 words, Min=18.67 words, and Max= 211.67 words. For the hypothesis that the number of words written in the no-music condition would differ from the number of words written in the music conditions, there was no significant result, $t(32)<1.698$, $p=0.19$. Individual analysis of each school revealed statistical significance for the Madison population. For the number of words written for Madison in the no-music condition, M=102.00 words, SD=34.74 words, Min=44 words, and Max=171 words. For the average number of words written for Madison in the music conditions, M=119.6 words, SD=30.26 words, Min= 65 words, and Max=172.67 words. As hypothesized the number of words written in the no-music condition significantly differed from the number of words in the music conditions, $t(15)>2.947$, $p=0.02$. The Louisa results were not significant. For the number of words written in the no-music condition, M=86.00 words, SD=48.08 words, Min= 26 words, and Max= 188 words. For the average number of words written in the music conditions, M=90.58 words, SD=50.76 words, Min=27 words, and Max=211.67 words. As noted the number of words written did not differ significantly between these conditions, $t(15)<1.698$, $p=0.84$. These results provide partial support for the hypothesis.

BEST COPY AVAILABLE

Discussion

It was predicted that participants would write more words in the music conditions than in the no-music condition. Results indicated that there was not a significant difference in writing productivity between the conditions overall. However, students did demonstrate an increase in writing productivity as illustrated in Figure 1. Although these findings are not significant, a definite difference in words written could be observed between conditions. This implies that music could have a possible influence on writing productivity. It is of interest to note that the results showed a significant difference in writing productivity between no-music and music conditions for participants in the Madison population. Results reflected no significant difference in writing productivity between the two conditions for the Louisa population. However, upon examining individual student's data, an increase in the number of words written over time can be seen for a majority of the students regardless of statistical significance. Calculations of students' number of words written can be found in Figures 2 and 3 for the Madison and Louisa populations respectively. As students were allowed to choose the music played, these results suggest that having a choice in creating the environment can positively influence writing productivity. To some extent these findings support previous research, suggesting that the influence of music on writing productivity requires further study.

Closer analysis of individual scores indicate trends for each population. In the Madison population, students initially scoring low with out music showed the greatest gains in the number of words written. Of interest to note is that the students who initially scored high in the no-music condition, showed minor increases, no change, or slight decreases in writing productivity. For the Louisa population, students who initially scored low with out music showed no change of

slight decreases in the number of words written. Those initially scoring higher in the no-music condition varied between slight increases and slight decreases in writing productivity.

Previous studies (Etaugh & Ptasnik, 1982; Dwyer, 1995;) have yielded support for the idea that having a choice in one's environmental factors can influence their motivational level. The findings of the present study tend to provide some support for this line of evidence. From the interview data collected, it was apparent that students valued having a choice in the music played. For example, many students commented that they felt they wrote more while listening to the music they liked. Other students noted that they felt if they had listened to music that was not of their choosing, they would not have been able to work. As one student explained, "It's annoying if it is someone else's music and if it's annoying you won't work." Other students shared this concern. Due to these comments and the numerical data, it appears that choice did play some role in their motivation to write.

When dealing with music, familiarity is an important factor to consider. Etaugh & Michals (1982) and Koppelman & Imig found contradictory results concerning familiarity with music and student performance. The former study showed that familiarity with music did not adversely affect students' reading comprehension. That is, if students reported being accustomed to studying with music, their performance on a reading comprehension test was not impaired after studying in this manner. In the latter study, it was noted that familiarity with music had a negative effect on students' behavior resulting in lower quality work. Consistent with Etaugh & Michals (1982) the present study demonstrated that familiarity did not negatively influence students' productivity. This can be concluded given the increase in number of words written and interview responses. For example, many students indicated that they were accustomed to

listening to the genre of music played, therefore the music did not distract them from their writing.

However, some students expressed that the anticipation of hearing the music and the associations made between other activities and the music distracted them. These students further explained that it became easier to write with music as time progressed. This suggests that music at first may inhibit writing productivity, but later as students become desensitized to the novelty of music, they may be able to concentrate and stay on-task. In the future researchers might consider looking at the longitudinal impact of music on writing.

Koppelman & Imig observed that music affected the quality of students' writing. Similarly the current study found that music influenced the quantity as well as the content of students' writing. Students reported that the music enabled them to think of different topics related to the lyrics. They also indicated that the music helped them to write more as they felt the music made the time pass by more quickly. These findings indicate that music can have varied effects on students' writing. Future research may wish to explore other aspects of writing, including prewriting activities.

The lack of a second no-music trial may have confounded the results. That is, no comparison could be made to determine whether the music itself impacted writing productivity. As Figure 1 indicates there was a slight increase in writing productivity for each population. However, this improvement cannot be attributed solely to the presence of music. It is plausible that the increase in writing productivity was due to sustained periods of writing. Specifically, children wrote more as they became accustomed to writing for fifteen-minute intervals. Future researchers may consider including a second baseline trial to eliminate this confound.

Another possible shortcoming of this study could be that not every student was able to listen to music specifically of his or her choosing. As the music selected reflected the majority preference of the classes, individual students may not have had the opportunity to listen to their preferred music. In these instances students' negative regard for the music may have inhibited their writing performance. To isolate the variable of choice, future studies may wish to individualize music for each participant. Personal headsets could be employed to accomplish this task.

The findings of this study warrant further research concerning the use of music as a motivational tool in the classroom. Moreover, it is advised that the factor of choice in music be investigated more in depth to fully understand its effect on motivation. Writing continues to be an obstacle for many students. Teachers should be encouraged to experiment with methods to increase students' motivation during writing. Research shows that environmental factors can serve to influence motivation. Background noise or music is one such factor. Music can help foster an anxiety-free, yet stimulating atmosphere to catalyze students' interest in writing. Having a decision in creating the classroom environment also encourages students' willingness to write. It appears that allowing students to have a choice in background music may promote their writing productivity. By further examining factors that motivate students to write teachers can work to increase students' productivity as well as love of writing.

References

Dickinson, S. Applying a workshop approach to improve writing in low achieving secondary school students. (ERIC Document Reproduction Service No. ED 325 858).

Dwyer, J. J. M. (1995). Effect of perceived choice on exercise intrinsic motivation. Health Values, 19, 2. 18-26.

Ebisutani, K. The effects of music on reading, oral language, and writing abilities: A review of literature. (ERIC Document Reproduction Service No. ED 333 356).

Etaugh, C. & Michals, D. (1975). Effects on reading comprehension of preferred music and frequency of studying to music. Perceptual and Motor Skills, 41. 553-554.

Etaugh, C. & Ptasnik, P. (1982). Effects of studying to music and post study relaxation on reading comprehension. Perceptual and Motor Skills, 55. 141-142.

Hanser, S. B. (1985). Music therapy and stress reduction research. Journal of Music Therapy, 22, 4. 193-206.

Koppelman, D. & Imig, S. The effect of music on children's writing content. (ERIC Document Reproduction Service No. 383 002).

Oldfather, P. (1983). Students' perspectives on motivating experiences in literacy learning. (ERIC Document Reproduction Service No. 358 423).

Siegel, S. F. (1986). Reduction of test anxiety using Pavlovian conditioning principles: A preliminary note. Psychological Reports, 59. 48-50.

Stainback, S. B., Stainback, W. C. & Hallahan, D. P. (1973). Effect of background music on learning. Exceptional Children, 40. 109-110.

Figure 1: Average number of words written in no-music and music conditions

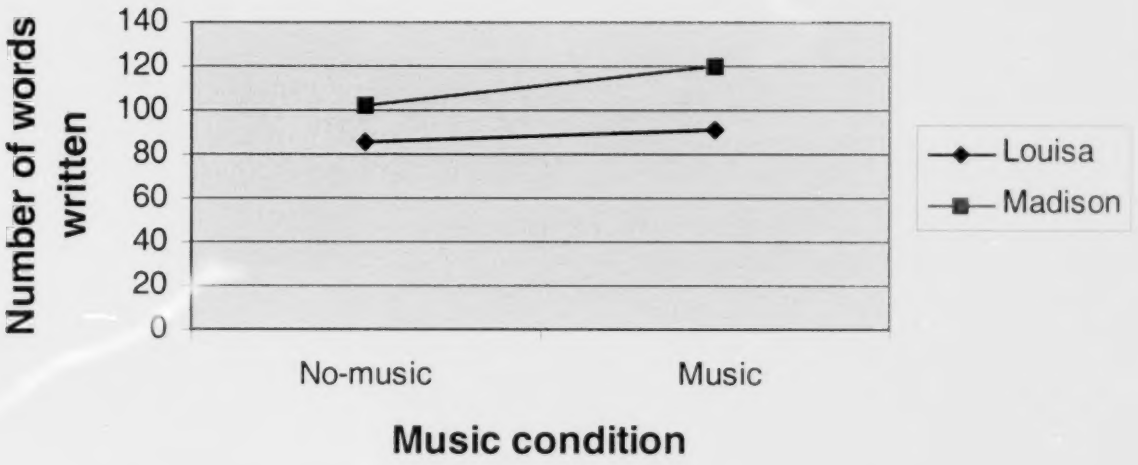


Figure 2: Madison-Number of words written by individual students

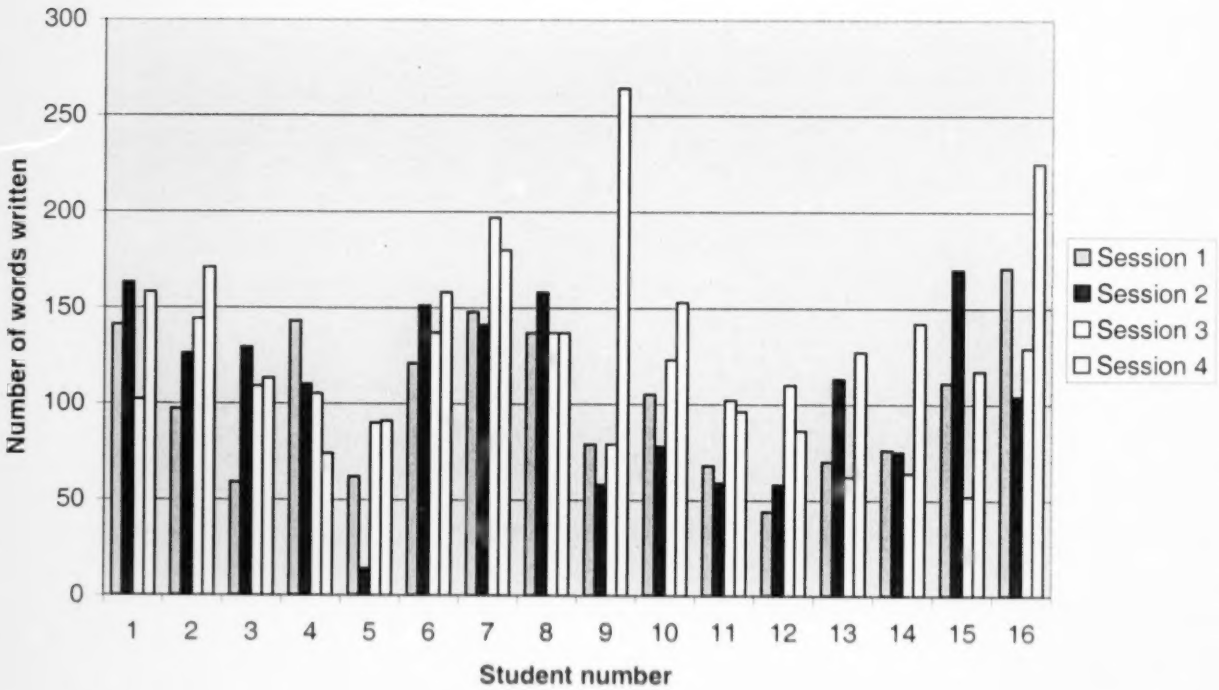
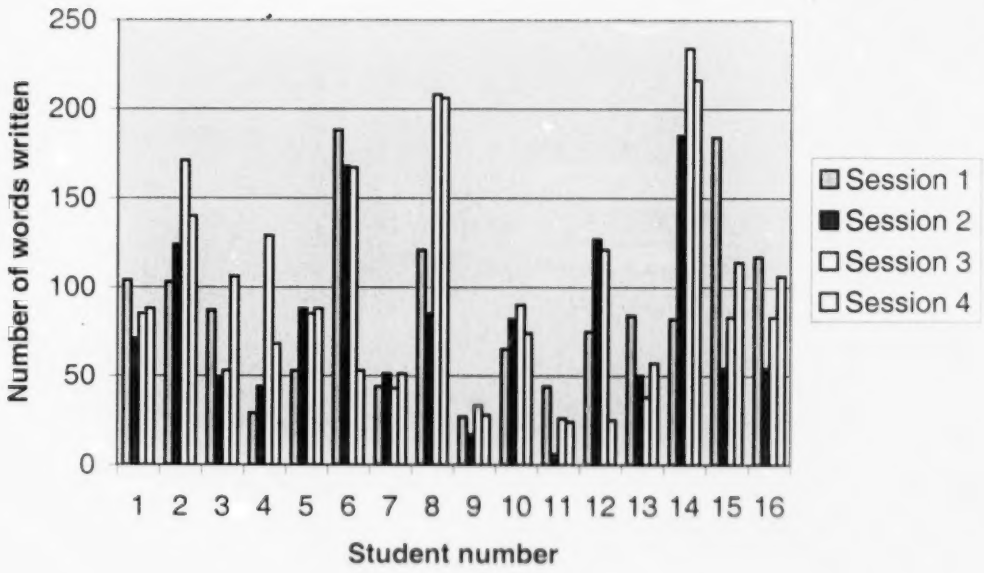


Figure 3: Louisa-Number of words written by individual students



Appendix A

NAME_____

YOUR THOUGHTS ON MUSIC

Directions: After listening to each song, rate each song on a scale from 1 to 5 to tell us how much you liked the song. 1 means you hated it. 5 means you loved it. Then, circle whether you have heard this song before.

1. "Tearing Up My Heart" by NSYNC

1	2	3	4	5
Hated it		O.K.		Loved it

Have you heard this song before? Yes No

2. "Spring" by Vivaldi

1	2	3	4	5
Hated it		O.K.		Loved it

Have you heard this song before? Yes No

3. "Where the Green Grass Grows" by Tim McGraw

1	2	3	4	5
Hated it		O.K.		Loved it

Have you heard this song before? Yes No

4. "Jumper" by Third Eye Blind

1	2	3	4	5
Hated it		O.K.		Loved it

Have you heard this song before? Yes No

5. "Miami" by Will Smith

1	2	3	4	5
Hated it		O.K.		Loved it

Have you heard this song before? Yes No

Directions: Rank your favorite type of music from 1 to 5. 1 is the type of music you like most, 2 is the type you like 2nd best, and 5 is the type you hate.

_____Top 40 (Backstreet Boys, NSYNC, Mariah Carey, Jewel)

_____Classical (Vivaldi, Mozart, Bach, Beethoven)

_____Country (Bryan White, Shania Twain, Garth Brooks, Faith Hill)

_____Alternative (Third Eye Blind, Green Day, Matchbox 20, Dave Matthews)

_____Hip Hop (Will Smith, Lauryn Hill, Jay-Z, Puff Daddy)

Questions: Circle Yes or No

Do you study to music? YES NO

Do you like listening to music? YES NO

Would you like to listen to music in the classroom? YES NO

Can you pay attention while music is playing? YES NO

What is your favorite song?_____

Who is your favorite artist?_____

Appendix B

Questions Used During Student Interviews

1. What did you think about listening to music in the classroom?
2. Could you concentrate on writing with the music?
3. What did you think of being able to choose your own music?
4. Do you think that you would do better listening to music you chose or music the teacher chose?
5. Would you want the paper you wrote to be graded?
6. Did you find it easier to write as the time went on? That is, did you find it easier to write at the beginning or the end?
7. Would you like your teacher to continue playing music during writing?

Appendix C

Survey Results

Louisa Ratings for Songs

	1	2	3	4	5
Tearing Up My Heart Top 40	0	0	2	3	13
Spring Classical	13	0	4	0	1
Where the Green Grass Grows Country	3	0	4	3	7
Jumper Alternative	1	1	4	3	9
Miami Hip-hop	2	0	0	0	16

Louisa Rankings for Genres

	1	2	3	4	5
Top 40	6	10	1	1	0
Classical	0	3	0	9	6
Country	2	3	7	1	5
Alternative	1	1	6	5	5
Hip-hop	9	1	4	2	2

Madison Ratings for Songs

	1	2	3	4	5
Tearing Up My Heart Top 40	0	0	1	2	14
Spring Classical	9	3	5	0	0
Where the Green Grass Grows Country	6	1	3	2	5
Jumper Alternative	1	2	4	3	7
Miami Hip-hop	0	1	1	1	14

Madison Rankings for Genres

	1	2	3	4	5
Top 40	9	5	3	0	0
Classical	0	2	1	4	10
Country	2	2	5	4	4
Alternative	1	0	8	6	2
Hip-hop	5	8	0	2	2